PERMIT TO CONSTRUCT

Lithographic Press IR/UV

Applicant's Name: *Lithographix, Inc*
Facility ID: 139799
Mailing Address: 12250 Crenshaw Blvd, Hawthorne, Ca 90250
Equipment Address: 12250 Crenshaw Blvd, Hawthorne, Ca 90250

EQUIPMENT DESCRIPTION

A/N 500188

TITLE V PERMIT - DE MINIMIS SIGNIFICANT PERMIT REVISION

A/N 513562 (P/C)

Identical Replacement for A/N 431032, PO F78612

LITHOGRAPHIC PRINTING PRESS M10, MITSUBISHI, MODEL 3000LS, SERIAL NUMBER 4472, 8 COLOR PLUS COATER, 40 INCH SHEET WIDTH, WITH A REFRIGERATED CHILLER, INFRARED LAMPS, 43 KW TOTAL, AND UV LAMPS, 129 KW TOTAL.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

3. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 1130 AND 1171.

4. THE FOUNTAIN SOLUTION USED IN THIS EQUIPMENT SHALL NOT CONTAIN MORE THAN EIGHT PERCENT (8%) BY VOLUME OF VOLATILE ORGANIC COMPOUNDS (VOC), AS APPLIED, INCLUDING WATER AND EXEMPT SOLVENTS.

5. THE TOTAL QUANTITY OF VOC EMISSIONS FROM THIS FACILITY SHALL NOT EXCEED 9,750 POUNDS IN ANY ONE CALENDAR MONTH. (FAC CONDITION)

6. IN ADDITION TO THE RECORDKEEPING REQUIREMENTS IN RULE 109, THE OPERATOR SHALL KEEP ADEQUATE RECORDS FOR THE EQUIPMENT TO VERIFY THE FOLLOWING ON A DAILY BASIS:

   A. DENSITY OF INK, IN POUNDS PER GALLON.

   B. PERCENTAGE BY WEIGHT OF LITHOGRAPHIC OILS IN EACH INK.

   C. THE INK ABSORPTION FACTOR AS SPECIFIED BY CURRENT SCAQMD GUIDELINES.

   D. VOC CONTENT OF FOUNTAIN SOLUTION, WASH MATERIALS, AND ANY OTHER VOC CONTAINING MATERIAL, IN POUNDS/GALLON AS APPLIED, INCLUDING WATER AND EXEMPT COMPOUNDS.

   E. DAILY VOC EMISSIONS IN POUNDS.

   F. OTHER DATA AS REQUIRED TO VERIFY COMPLIANCE WITH THE CONDITIONS SPECIFIED IN THIS PERMIT.

7. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY TOXIC AIR CONTAMINANTS IDENTIFIED IN RULE 1401, TABLE 1 WITH AN EFFECTIVE DATE OF JUNE 5, 2009 OR EARLIER WITH THE EXCEPTION OF ISOPROPYL ALCOHOL (CAS# 67-63-0), AMMONIA (CAS# 7664-41-7), O-XYLENE (CAS# 95-47-6) AND ETHYLENE GLYCOL MONOBUTYL ETHER (EGBE) (CAS# 111-76-2).

8. MATERIAL SAFETY DATA SHEETS FOR ALL MATERIALS USED AT THIS FACILITY AND SUBJECT TO DISTRICT RULES SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. (FAC CONDITION)

9. PERMIT SHIELD: NOT WITHSTANDING THE OTHER REQUIREMENTS AND CONDITIONS IN THIS PERMIT, THIS EQUIPMENT IS NOT SUBJECT TO THE FOLLOWING RULE REQUIREMENTS:

   RULE 1128 - VERSION DATED 3/8/96

   COMPLIANCE WITH THE CONDITIONS OF THIS TITLE V PERMIT SHALL BE DEEMED IN COMPLIANCE WITH ANY REGULATORY REQUIREMENTS APPLICABLE AS OF THE DATE OF PERMIT ISSUANCE TO THIS EQUIPMENT, PROVIDED THAT SUCH REGULATORY REQUIREMENTS ARE INCLUDED AND SPECIFICALLY IDENTIFIED IN THIS PERMIT. NOTHING IN THIS PERMIT OR IN

ANY PERMIT SHIELD CAN ALTER OR AFFECT: (a) UNDER SECTION 303 OF THE FEDERAL CLEAN AIR ACT, THE PROVISIONS FOR EMERGENCY ORDERS; (b) THE LIABILITY OF THE OPERATOR FOR ANY VIOLATION OF APPLICABLE REQUIREMENTS PRIOR TO OR AT THE TIME OF PERMIT ISSUANCE; (c) THE APPLICABLE REQUIREMENTS OF THE ACID RAIN PROGRAM; (d) THE ABILITY OF EPA TO OBTAIN INFORMATION FROM THE OPERATOR PURSUANT TO SECTION 114 OF THE FEDERAL CLEAN AIR ACT; (e) THE APPLICABILITY OF STATE OR LOCAL REQUIREMENTS THAT ARE NOT "APPLICABLE REQUIREMENTS", AS DEFINED IN RULE 3000, AT THE TIME OF PERMIT ISSUANCE BUT WHICH DO NOT APPLY TO THE FACILITY, SUCH AS TOXICS REQUIREMENTS UNIQUE TO THE STATE; OR (f) THE APPLICABILITY OF REGULATORY REQUIREMENTS WITH COMPLIANCE DATES AFTER THE PERMIT ISSUANCE DATE. THIS PERMIT SHIELD SHALL NOT APPLY TO ANY OPERATIONAL CHANGE MADE PURSUANT TO THE OPERATIONAL FLEXIBILITY PROVISIONS OF DISTRICT RULE 3005.

BACKGROUND

A/N 513562 was submitted on 8/4/10 to replace the existing Mitsubishi M6 eight-color press under A/N 431032, PO F78612. The equipment will operate under the existing facility-wide VOC emission limit of 9,750 lb/month. Therefore, this project will not result in any emission increase from the facility. There is no equipment cap for the press being replaced. There will be no combustion contaminants since the dryer is electric (IR & UV). Lithographix is a commercial lithographic printing shop. They produce mostly reports, inserts, magazines, brochures, calendars, and other printed articles.

Lithographix is a Title V facility. A Title V permit revision application no. 513409 was also submitted with this application. The Title V permit was renewed on May 11, 2010 and this is the first revision to the renewal. The proposed project is considered as a "de minimis significant permit revision" to the renewed Title V permit, as described in the Regulation XXX evaluation.

The District compliance data base does not show any NOV, NC or complaints for this facility in last 2 years. The inspector visited the facility on 11/18/10 and they were found in compliance.

PROCESS DESCRIPTION

The facility will use the lithographic printing process on paper substrate. Lithographic printing is also called offset printing and is the most popular of the four major printing processes. Lithography uses the planographic method. The image and non-printing areas are essentially on the same plane of a thin metal plate and the distinction between them is maintained chemically. Printing is from a plane or flat surface and there are two differences between offset lithography and other processes;

1. It is based on the principle that grease and water do not mix and
2. Ink is offset first from the plate to a rubber blanket and then from the blanket to the paper.

When the printing plate is made the printing image is rendered grease receptive and water repellent while the non-printing areas are rendered water receptive and ink repellent. On the press the plate is mounted on the plate cylinder which as it rotates comes into contact successively with rollers wet by ink. The dampening solution wets the non-printing areas of the plate and prevents the ink from wetting these areas. The ink wets the image areas that are transferred to the intermediate blanket cylinder. The paper picks up the image as it passes between the blanket cylinder and the impressive cylinder.

EMISSION CALCULATIONS

The facility will operate under an emission cap of 9,750 lbs/day of VOC. This equipment will not result in any facility emission increase. Ave and max material usages and VOC emissions were provided in a spreadsheet submitted in the application package and summarized below.

NSR: MAX VOC R1 = R2 = 68 lb/day
AEIS: AVG VOC R1 = R2 = 1.8 lb/hr

Operating schedule: 24 hrs/day, 6 days/wk, 52 wks/yr (max)

RULE EVALUATION

RULE 212(c)(1) *This section requires a public notice for all new and modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school.*

Since there are no schools within 1,000 feet of the facility, public notice is not required.

RULE 212(c)(2)&(g) *This section requires a public notice for any new and modified equipment or facility which have an on-site emission increase exceeding any of the daily maximums specified in subdivision (g).*

This is a functionally identical replacement. There is no emission increase from the facility due to this project. The new press will have the same emissions as the replaced press. Public notice is not required.

RULE 212(c)(3) *This section requires a public notice for all new or modified permit units with increases in emissions of toxic air contaminants listed in Table I of Rule 1401 resulted in MICR greater than $1E^{-6}$ per permit unit or greater than $10E^{-6}$ per facility.*

There are no carcinogenic compound emissions from this project. A small amount of toxic contaminants (acute and chronic) listed in Rule 1401 as amended 6/05/09 will be emitted; however, the calculations show that the proposed project complies with all applicable R1401 requirements. Public notice is not required.

RULE 401 *Visible Emissions*

Visible emissions are not expected with proper maintenance and operation of this equipment. The system shows no visible emissions complaints.

RULE 402 *Nuisance*

Operation of this equipment is not expected to create complaints or nuisance with proper maintenance and operation. The system shows no nuisance complaints.

RULE 1130 *Graphic Arts*

This operation complies with the VOC content requirements. The new press will have a chilled fountain.

Material	***Rule 1130 VOC Limit***	***Actual VOC Content***
Fountain Sol'n	100 g/l (0.83 lb/gal) of material	0.34 lb/gal of material
Inks	300 g/l (2.5 lb/gal) of coating	0.01-1.35 lb/gal of coating

RULE 1171 *Solvent Cleaning Operations*

This operation complies with the VOC content requirements.

Material	***Rule 1171 VOC Limit***	***Actual VOC Content***
Blanket/RollerWash	100 g/l (0.83 lb/gal)	0.75-0.8 lb/gal
UV Wash	100 g/l (0.83 lb/gal)	0.77 lb/gal

REG XIII *Rule 1303(a), Best Available Control Technology (BACT)*

BACT is met by use of fountain solution with less than 8% by volume of VOC and low VOC content washes ≤ 100 g/l.

Material Fountain Solution (FS)	VOC Content (lb/gal)	Usage (gal/day)	Total VOC (lb/day)	Total VOC (gal/day)
SF94	0.20	0.938	0.19	0.027
HT238 Alc Subs	6.30	1.328	8.37	1.195
Water	0.00	20.00	0.00	0.000
TOTAL		**22.27**	**8.55**	**1.22**

	(a)	(b)	(c)	(d)	
Assume density of VOC in FS =				7	lb/gal
VOC lbs/gal as applied (divide c/b) =				0.384	lb/gal
VOC content of the fountain sol'n as applied (g/l)=				46.02	gms/liter.
The volume % of VOC in the fountain sol'n as applied =				5.49	< 8 %, complies w/ BACT

Rule 1303 (b)(1), Modeling

Modeling is not required for VOC.

Rule 1304 (c)(1), Offsets Exemption

Offsets are not required since there is no emission increase from the facility. The company will continue to operate under the same facility permit condition of 9,750 lbs/day of VOC.

RULE 1401 *New Source Review of Toxic air Contaminants*

There will be a small amount of toxic contaminants listed in Rule 1401 as amended 6/5/09 from the new press. However there are no carcinogenic compounds present; the acute and chronic compound emissions are summarized below. Tier 2 analysis was performed and both the chronic and the acute commercial and residential hazard indices are less than one.

Materials	*Usage gal/day*	*VOC lb/gal*	*Density lb/gal*	*EF Calc*	*Emissions VOC lb/day*	*Toxic Cpd.*	*Toxic Wt %*	*Toxic Emissions*	
								lb/day	*lb/hr*
Coating									
UV gloss	60.0	0.47	9.09		28.2	o-xylene	2%	10.91	0.455
Starkote 3025,366	75.0	0.2	8.65		15.0	IPA	2%	12.98	0.541
						Ammonia*	2%	6.3	0.26
Inks									
UV inks	31.0	0.225	11.26	0.01	0.3	o-xylene	2%	6.98	0.291
Process inks	70.0	1.35	8.51	0.01	0.6	o-xylene	2%	11.91	0.496
** Ink absorption factor 95%*									
** Emission factor = (1-.95) X density X wt %*									
Fountain Solution									
Starfount SF94	0.9	0.2	8.80		0.2				
HT238 alcoh Subst	1.3	6.3	7.80		8.2	EGBE	10%	1.01	0.04
Clean-up Solvent									
Blanket Wash	1.25	0.75	7.22		0.9	EGBE	10%	0.90	0.04
QUV Wash	1.5	0.77	7.50		1.2				
Roller wash	2.5	0.80	8.60		2.0	EGBE	10%	2.15	0.05
Total VOC (lbs/day)					***55***				

*The aqueous resin compound (Starkote 3025 & 366) contains a maximum of 2% ammonium hydroxide. Assuming the worst scenario:

2% of 75 gal/day X 8.65 lb/gal = 12.97 lb/day NH3
MW: NH3 = 17, NH4OH= 35
[12.97 (17/35) lb/day] = 6.3 lb/day / [day/24 hrs] = 0.26 lb/hr
NH3 = 0.26 lb/hr

TAC	*CAS*	*Chronic*	*Acute*	*Emissions lb/hr*
IPA	67-63-0	X	X	0.541
NH3	7664-41-7	X	X	0.26
o-xylene	95-47-6	X	X	1.24
EGBE	111-76-2		X	0.13

REG XXX

This facility is not in the RECLAIM program. The proposed project is considered as a "de minimis significant permit revision" to the Title V permit for this facility.

Rule 3000(b)(6) defines a "de minimis significant permit revision" as any Title V permit revision where the cumulative emission increases on non-RECLAIM pollutants or hazardous

air pollutants (HAP) from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	*Daily Maximum (lbs/day)*
HAP	30
VOC	30
NOx	40
PM10	30
SOx	60
CO	220

To determine if a project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or HAPs, emission increases for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the Title V renewal permit shall be accumulated and compared to the above threshold levels. This proposed project is the 1st permit revision to the Title V renewal permit issued to this facility on May 11, 2010. This revision also includes the removal of one lithographic printing press (Mitsubishi M2) under A/N 431028 that has been removed. Minor updates to the equipment descriptions of two presses are also included (add serial number to press M8 under A/N 455541 and press M9 under A/N 455538). The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

Revision	***HAP***	***VOC***	***NOx***	***PM_{10}***	***SOx***	***CO***
1st Permit Revision: replacement of litho press under A/N 431032 (new A/N 513552) & removal of litho press M2 under A/N 431028.	0	0	0	0	0	0
Cumulative Total since Renewal (5-14-09)	0	0	0	0	0	0
Maximum Daily Limit	30	30	40	30	60	220

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "de minimis significant permit revision", it is exempt from the public participation requirements under Rule 3006 (b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not raise any objections within the review period, a revised Title V permit will be issued to this facility with a P/C for the new press under A/N 513552 and removal of press under A/N 431028, P/O F78609.